
VARICELLA (CHICKENPOX)

Clinical Features: The disease is characterized by a generalized, pruritic rash that progresses from macules to papules to vesicular lesions before crusting. Healthy, unvaccinated children normally have 200-500 lesions in 2 to 4 successive crops — the lesions are more highly concentrated on the trunk than the extremities. Rash is usually the first sign of disease in children, followed by malaise, fever, and itching. Adults may experience fever and malaise in the 1 - 2 days prior to rash onset; the clinical course in adults is often more severe than what is seen in children. Adults also have a higher risk of complications, including secondary bacterial infections, pneumonia, dehydration, aseptic meningitis, and encephalitis.

Causative Agent: varicella zoster virus (VZV)

Mode of Transmission: The virus is highly transmissible from person to person. Direct contact with a case, or contact with a case's vesicle fluid or respiratory secretions (via airborne or droplet spread) may cause infection. Indirect transmission may occur if a case's vesicle fluid or respiratory secretions have soiled clothing, linens, etc.

Incubation Period: The incubation period may range from 10 to 21 days; the average incubation period is 14 - 16 days from exposure.

Period of Communicability: Cases are usually infective from 1 - 2 days before the onset of rash until all lesions are crusted. Cases with altered immunity may be infectious for a longer period of time.

Public Health Significance: A vaccine to protect against VZV is available; vaccination is required for school entry in Kansas. Disease has been reported in vaccinated children, although these "breakout" illnesses have been mild — vaccinated children that contract varicella normally report fewer lesions (less than 50), no fever, and a shorter duration of illness compared to non-vaccinated individuals. School and daycare restrictions apply to infected enrollees. The vaccine is also effective as postexposure prophylaxis in susceptible persons.

Reportable Disease in Kansas Since: 2003

Clinical Criteria

- An illness with acute onset of diffuse (generalized) maculo-papulovesicular rash without other apparent cause.

Laboratory Criteria for Surveillance Purposes

- Isolation of varicella virus from a clinical specimen, ***OR***
- Direct fluorescent antibody (DFA), ***OR***
- Polymerase chain reaction (PCR), ***OR***
- Significant rise in serum varicella immunoglobulin G (IgG) antibody level by any standard serologic assay

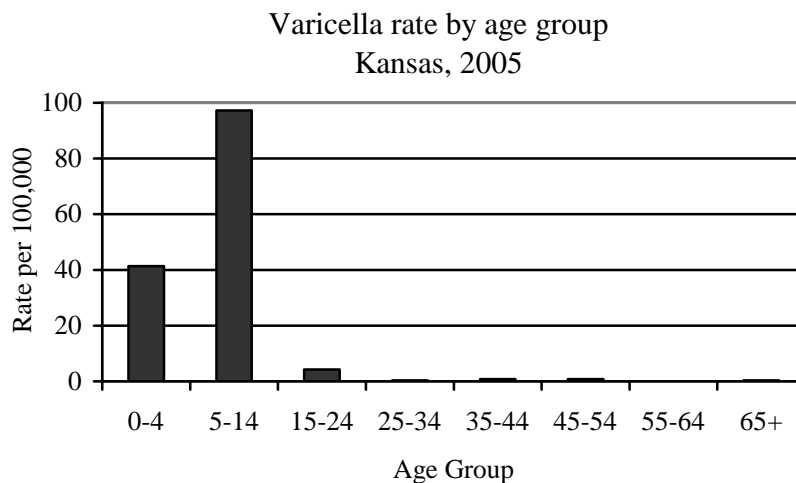
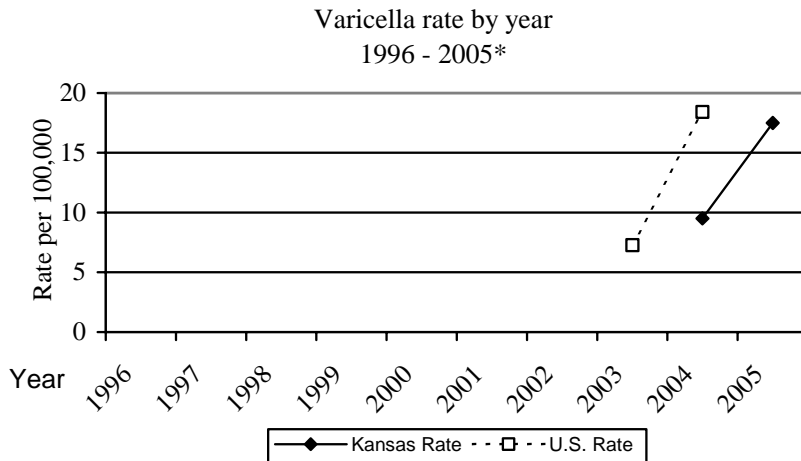
Surveillance Case Definitions

- *Confirmed:*
 - A case that is laboratory confirmed, ***OR***
 - A case that meets the clinical case definition and is epidemiologically linked to a confirmed or probable case (Two probable cases that are epidemiologically linked would be considered confirmed, even in the absence of laboratory confirmation.)
- *Probable:* A case that meets the clinical case definition, is not laboratory confirmed, and is not epidemiologically linked to another probable or confirmed case

Epidemiology and Trends

2005 Kansas Count: 478

	<i>Rate per 100,000</i>	<i>95% CI</i>
Kansas Rate	17.5	(15.9 - 19.0)
U.S. Rate (2004)	18.4	NA
<i>Gender</i>		
Male	18.0	(15.8 - 20.3)
Female	16.4	(14.3 - 18.6)
<i>Race</i>		
White	15.7	(14.1 - 17.2)
Black	11.5	(6.5 - 16.6)
Asian/Pacific Islander	14.4	(5.0 - 23.9)
Native American	9.8	(0 - 20.8)
<i>Ethnicity</i>		
Hispanic	13.6	(8.7 - 18.5)
Non-Hispanic	13.2	(11.8 - 14.7)
<i>Geographic area</i>		
Urban County	15.8	(13.7 - 17.9)
Non-Urban County	19.2	(16.8 - 21.5)



In 2005, 478 confirmed cases of chickenpox were reported in Kansas, an increase of 219 cases from the previous year. The increase is attributed to more complete reporting by health care providers, laboratories, and schools during 2005. Varicella has been a reportable disease since 2004 in Kansas—previously, only deaths resulting from varicella were reportable.

Although a vaccine is now licensed to prevent varicella, the incidence remains high. The vast number of case reports during 2005 precluded exhaustive investigation of every possible case; as a result, many cases may not have been reported as “confirmed”. For example, a case may be counted as “confirmed” if it is linked to another infected person, but this link may not be revealed without intensive follow-up. Unlinked, non-laboratory confirmed cases are counted as “probable” cases—577 probable cases were reported during 2005.